This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Currently Amended) ~~The optical communication system of claim 2~~ An optical communication system that compensates for polarization mode dispersion (PMD), comprising:

an optical source that transmits two or more optical signals having different optical frequency bands; and

a first optical compensator that receives the two or more optical signals and rotates at least one polarization state of the two or more optical signals based on an error condition to compensate for PMD, wherein the first optical compensator is positioned at a location between the optical source and the optical receiver and defined by ~~the~~ a ratio $L1 / L2$;

wherein $L1 / L2$ is less than approximately 1.5, and wherein $L1$ is the length of a first optical conduit between the optical compensator and optical source, and $L2$ is the length of the second optical conduit between the optical compensator and optical receiver.

11. (Original) The optical communication system of claim 10, wherein $L1 / L2$ is approximately $1.5 \geq (L1 / L2) \geq 0.25$.

12. (Original) The optical communication system of claim 11, wherein the ratio $L1 / L2$ is approximately 0.65.

13. (Currently Amended) ~~The optical communication system of claim 2~~ An optical communication system that compensates for polarization mode dispersion (PMD), comprising;

an optical source that transmits two or more optical signals having different optical frequency bands; and

a first optical compensator that receives the two or more optical signals and rotates at least one polarization state of the two or more optical signals based on an error condition to compensate for PMD, wherein the first optical compensator is positioned at a location between the optical source and the optical receiver and defined by ~~the~~ a ratio $\overline{\Psi}1 / \overline{\Psi}2$;

wherein $\overline{\Psi}1 / \overline{\Psi}2$ is less than approximately 1.2, and wherein $\overline{\Psi}1$ is the average PMD of a first optical conduit between the optical compensator and optical source, and $\overline{\Psi}2$ is the average PMD of the second optical conduit between the optical compensator and optical receiver.

14. (Currently Amended) The optical communication system of claim 13, wherein ~~is $\overline{\Psi}1 / \overline{\Psi}2$~~ approximately $1.2 \geq (\overline{\Psi}1 / \overline{\Psi}2) \geq 0.5$.

15. (Original) The optical communication system of claim 14, wherein the ratio $\overline{\Psi}1 / \overline{\Psi}2$ is approximately 0.8.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Currently Amended) ~~The method of claim 18~~ <u>A method for compensating for polarization mode dispersion (PMD), comprising:</u>

<u>rotating the polarization states of one or more optical signals based on an error condition of at least one of the optical signals at an optical compensator; and</u>

dispersing the rotated optical signals using a first birefringent optical conduit to compensate for PMD;

receiving the dispersed optical signals at an optical receiver;

measuring the error condition at the optical receiver; and

changing the polarization state of rotation at the optical compensator based on the error condition to compensate for PMD, wherein the step of rotating occurs at a location between the optical source and the optical receiver and defined by ~~the~~ a ratio $L1 / L2$;

wherein $L1 / L2$ is less than approximately 1.5, and wherein $L1$ is the length of a first optical conduit between the optical compensator and optical source, and $L2$ is the length of the second optical conduit between the optical compensator and optical receiver.

27. (Original) The method of claim 26, wherein $L1 / L2$ is approximately $1.5 \geq (L1 / L2) \geq 0.25$.

28. (Original) The method of claim 27, wherein the ratio $L1 / L2$ is approximately 0.65.

29. (Currently Amended) The method of claim 18, wherein the step of rotating occurs at a location between the optical source and the optical receiver and defined by ~~the~~ a ratio $\overline{\Psi}1 / \overline{\Psi}2$;

wherein $\overline{\Psi}1 / \overline{\Psi}2$ is less than approximately 1.2, and wherein $\overline{\Psi}1$ is the average PMD of a first optical conduit between the optical compensator and optical source, and $\overline{\Psi}2$ is the average PMD of the second optical conduit between the optical compensator and optical receiver.

30. (Currently Amended) The method of claim 29, wherein ~~is~~ $\cancel{\overline{\Psi}1 / \overline{\Psi}2}$ approximately $1.2 \geq (\overline{\Psi}1 / \overline{\Psi}2) \geq 0.5$.

31. (Original) The method of claim 30, wherein the ratio $\overline{\Psi}1 / \overline{\Psi}2$ is approximately 0.8.

32. (Currently Amended) The method of claim 18, A method for compensating for polarization mode dispersion (PMD), comprising:

rotating the polarization states of one or more optical signals based on an error condition of at least one of the optical signals at an optical compensator; and

dispersing the rotated optical signals using a first birefringent optical conduit to compensate for PMD;

receiving the dispersed optical signals at an optical receiver;

measuring the error condition at the optical receiver; and

changing the polarization state of rotation at the optical compensator based on the error condition to compensate for PMD, wherein the step of rotating comprises:

first rotating the polarization states of the two or more optical signals received from the optical source using a first optical compensator;

second propagating the two or more first rotated optical signals using a second optical conduit; and

second rotating the polarization states of the two or more optical signals received from second optical conduit using a second optical compensator, wherein the second optical compensator provides the two or more second rotated optical signals to the first optical conduit.